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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,755	03/06/2001	Robert Coggeshall	248588008US	3881
25096	7590	12/14/2004	EXAMINER	
PERKINS COIE LLP			PHAN, MAN U	
PATENT-SEA			ART UNIT	
P.O. BOX 1247			PAPER NUMBER	
SEATTLE, WA 98111-1247			2665	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/800,755

Applicant(s)

COGGESHALL, ROBERT

Examiner

Man Phan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 12-20, 22-32 is/are rejected.
- 7) ☒ Claim(s) 7-11, 21 and 33-35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Amendment and Argument

1. This communication is in response to applicant's 07/16/2004 Amendment in the application of Coggeshall for a "Contacting a computing device outside a local network " filed 03/06/2001. The proposed amendment to the claims and response have been entered and made of record. Claim 29 has been amended, Claims 1-35 are pending in the present application.

2. Applicant's amendment and argument to the rejected claims are insufficient to distinguish the claimed invention from the cited prior arts or overcome the rejection of said claims under 35 U.S.C. 103 as discussed below. Applicant's argument with respect to the pending claims have been fully considered, but they are not persuasive for at least the following reasons.

3. Applicant asserts that there is no motivation to combine the prior art as proposed in the office action, Britton et al. (US#6,697,326) with Mellquist (US#6,115,545), i.e. In response, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Britton discloses the use of Address Resolution Protocol (ARP) in

TCP/IP networks such as the Internet, provides to requesting hosts a mapping between an IP address and a media access control (MAC) address. Britton's invention ensures that a single and consistent reply is made to ARP request in a system of connected IP networks (*interconnected IP networks with different addresses A and B as shown in Fig. 1 and Flow chart 5*). In the same field of endeavor, Mellquist discloses a network device connected to a local network is configured using a module operating within a console connected to the local network. Once activated, the module obtains an unused network address. After obtaining the unused network address, the console waits for receipt of a request from the network device. Upon receipt of the request, the console forwards to the network device a response. The response includes the unused address along with subnet and gateway information for the console. The console then establishes a network connection to the network device and displays on a monitor for the console, an address value, a subnet mask value and a gateway value for the network device.

Applicant's argument with respect to the rejected claims of record (page 12, last paragraph) that the cited references do not disclose or suggest establishing contact with a node in one network from another node in another different network. Applicant further alleges that Britton's resolution protocol requests applied to the *same physical network*. However, Britton et al. (US#6,697,326) discloses in Fig. 1 a block circuit diagram illustrated of a host containing three adapters, two of which are connected to *first network* and the third being connected to a *different network* in establishing communications in IP networks utilizing ARP request. Generally to the field of networking, a host which needs to learn the MAC address for a given IP address broadcasts an ARP request containing the IP address to all routers and hosts in a network. The requests are received by adapters at the hosts; it is an adapter that

owns an IP address and a corresponding MAC address. The requesting host learns the MAC address corresponding to an IP address by virtue of an ARP reply to an ARP request. An ARP reply is sent from the host that owns the corresponding adapter or, in some cases, an adapter is arranged to perform ARP processing and it responds to ARP requests instead of the host.

Such an adapter is called an offload adapter. In the remainder of this specification, host will be used to refer to both hosts that perform some kind of data processing in the traditional sense and to routers that route messages between networks or to nodes that perform both functions (Col. 1, lines 14 plus). Refer to Fig. 2, in which when an adapter (A) becomes active, the owning host sends an ARP advertisement into the network over adapter A that associates the MAC address for adapter A (MAC-A) with an IP address (IP-A). This advertisement is received by all hosts in the network and they update their ARP cache table to map IP-A to MAC-A accordingly. If the advertisement is also received at the sending host over a different adapter B, then the host knows that adapter B is on in the same physical network as adapter A. Therefore, B can be designated as a backup adapter for A and A can be designated as backup adapter for B. The host maintains a backup adapter field for each adapter owned by the host where this information is maintained. When the host discovers that adapter B is in the same network as adapter A, it queries the backup adapter field. If no backup adapter has been designated for A, then the host sets B as the backup adapter for A. Likewise, the host queries the backup adapter field for adapter B and sets A as the backup adapter for B if no backup adapter has already been designated. If adapter A fails or becomes inactive, the host resets the backup adapter field for any adapter it owns for which A is marked as the backup adapter. If a backup adapter B has been designated for A, the owning

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host also sends an ARP advertisement associating MAC-B with IP-A. This advertisement causes each host in the network to update their ARP cache table to map IP-A to MAC-B. This allows network connections to IP-A originally served via adapter A to continue non-disruptively over adapter B and it also provides access to the host for subsequent new connections. Whenever the host receives an ARP request for IP-A on adapter B, the host replies to the request with MAC-B. When adapter A later becomes active, the host sends a gratuitous ARP advertisement that maps IP-A to MAC-A. This allows adapter A to re-assume responsibility for responding to ARP requests for IP-A (Col. 6, lines 2 plus). Therefore, the Examiner maintains that the references cited and applied in the last office actions are maintained in this office action.

Claim Rejections - 35 USC ' 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 19-20, 22-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Britton et al. (US#6,697,326) in view of Mellquist (US#6,115,545).

With respect to claims 19-20, 22-24 and 29-32, the references disclose a novel method and system for establishing communications between two computing devices, according to the essential features of the claims. Britton et al. (US#6,697,326) provides a method of multiple computing hosts using the Internet Protocol (IP), and to the use of the Address Resolution Protocol (ARP) and to ensuring that only a single and consistent reply is generated in response to each ARP request. Britton teaches in Fig. 1 a block diagram illustrated a host containing three adapters, two of which are connected to a first network (TR1), and the third being connected to a different network (TR2) in communications (Col. 1, lines 36 plus and Col. 9, lines 45 plus). The Address Resolution Protocol (ARP), used in TCP/IP networks such as the Internet, provides to requesting hosts a mapping between an IP address and a media access control (MAC) address. A host which needs to learn the MAC address for a given IP address broadcasts an ARP request containing the IP address to all routers and hosts in a network. The requests are received by adapters at the hosts; it is an adapter that owns an IP address and a corresponding MAC address. The requesting host learns the MAC address corresponding to an IP address by virtue of an ARP reply to an ARP request. An ARP reply is sent from the host that owns the corresponding adapter or, in some cases, an adapter is arranged to perform ARP processing and it responds to ARP requests instead of the host (Col. 1, lines 14-32). In the same field of endeavor, Mellquist (US#6,115,545) discloses in Fig. 1 a simplified block diagram of a local network 32 with a local console 34 and a network device 33 are shown connected to. Local network 32 is connected to Internet 30 through a gateway 31 for establishing a network connection to the network device (Col. 4, lines 35 plus, and Col. 6, lines 63 plus).

Regarding claims 25-28, Mellquist further teaches in Fig. 3 a data flow diagram illustrated IP configuration of a network device in establishing communications, in which a network device connected to a local network is configured using a module operating within a console connected to the local network. Once activated, the module obtains an unused network address. After obtaining the unused network address, the console waits for receipt of a request from the network device. Upon receipt of the request, the console forwards to the network device a response. The response includes the unused address along with subnet and gateway information for the console. The console then establishes a network connection to the network device and displays on a monitor for the console, an address value, a subnet mask value and a gateway value for the network device (Col. 3, lines 30 plus).

One skilled in the art would have recognized the need for effectively and efficiently establishing communications between two computing devices utilizing ARP in a system of connected IP networks, and would have applied Mellquist's teaching of the IP configuration of network device connected to a local network into Britton's novel use of the ARP in a system of connected IP networks. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Mellquist's automatic IP address allocation and assignment into Britton's method and apparatus for generating replies to address resolution protocol (ARP) requests with the motivation being to provide a method and system for establishing contact with a computing device that is outside the distinguished computer network.

6. Claims 1-6 and 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Britton et al. (US#6,697,326) in view of Mellquist (US#6,115,545) as applied to the claims above, and further in view of O'Toole et al. (US#6,345,294).

With respect to claims 1-6 and 12-17, Britton et al. (US#6,697,326) and Mellquist (US#6,115,545) disclose the claimed limitations discussed in paragraph 3 above. However, these claims differ from the claims above in that the claims require the feature of using the logical target address of the message to communicate with the second node. In the same field of endeavor, O'Toole et al. (US#6,345,294) discloses such configuration establishing communications between computing devices in different networks. O'Toole teaches in Fig. 4 a flow chart illustrated the boot procedure of an appliance in establishing communications, wherein the booting parameters comprise an IP address of the appliance. With reference to Fig. 4, the appliance, upon being powered on (step 100), makes use of known protocols of boot or DHCP requests (step 102) to obtain a source of network parameters. The boot server or DHCP server is a computer that acts as a server in the local networking environment and that responds to certain types of route requests messages. A boot server or DHCP server typically responds with a small message that contains some parameters that the requesting computer needs to be given (step 104). These parameters typically include the IP address of the appliance that is attempting to boot, the subnet mask of the appliance, the IP addresses of one or more routers (typically one router closest to the appliance, such as a router within the same building as the appliance, which may be connected directly to the Internet or which instead may be internal for a large building), one or more name servers (typically two or more name servers; computers, in order to operate properly, often need to be told the address of the

name server that is used to translate the names of computers, including addresses of computers), as well as numerous optional parameters. The appliance can construct candidate network parameters both by communicating with a boot server or DHCP server, as described above, and by simply observing other traffic on the network. If the appliance has received candidate network parameters from a boot server or a DHCP server (step 104), it will test these parameters by attempting to send and receive network messages (step 106) (Col. 7, lines 40plus).

One skilled in the art would have recognized the need for effectively and efficiently establishing communications between two computing devices utilizing ARP in a system of connected IP networks, and would have applied O'Toole's configuring the second node to receive messages at the logical target address of the message, and Mellquist's teaching of the IP configuration of network device connected to a local network into Britton's novel use of the ARP in a system of connected IP networks. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply O'Toole's methods and apparatus for remote configuration of an appliance on a network, and Mellquist's automatic IP address allocation and assignment into Britton's method and apparatus for generating replies to address resolution protocol (ARP) requests with the motivation being to provide a method and system for establishing contact with a computing device that is outside the distinguished computer network.

Allowable Subject Matter

7. Claims 7-11, 21 and 33-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is an examiner's statement of reasons for the indication of allowable subject matter: The closest prior art of record fails to disclose or suggest wherein it is determined that no address resolution response to the detected address resolution request is transmitted from a node in the first network other than the first node if at least a threshold period of time elapses after the address resolution request is detected/if the detected address resolution request is rebroadcast at least a threshold number of times without a response to the detected address resolution request being detected, as specifically recited in claims 7-9; whether in response to determining that no address resolution response to the detected address resolution request is transmitted from a node in the first network other than the first node,. Sending a gratuitous address resolution protocol request identifying the first node as the owner of the logical target address contained in the detected address resolution request, as recited in claims 10-11. The closest prior art of record fails to disclose or suggest wherein adopting the target address contained by the first message as the address of the first node; including the target address contained by the first message in the second message as the source address of the second message, and receiving messages having as their target addresses the target address contained by the first message, as recited in the claims 21, 33-35.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION THIS ACTION IS MADE FINAL**. See MPEP ' 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

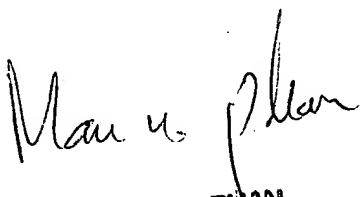
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

Mphan

12/07/2004.

A handwritten signature in black ink, appearing to read "Man U. Phan". The signature is written in a cursive, flowing style.

MAN U. PHAN
PRIMARY EXAMINER